

Technical Note 6.70.104 SS2000 / SS2200 Association Procedures

Scope: This document provides the process by which a SS2000 / SS2200 Occupancy Sensor is Associated to an SS1107 PTAC Controller or SS5000 / SS5200 Thermostat

NOTE: This document applies only to the SS1107 PTAC Controller variant and SS5000 / SS5200 rev 4.5 and 5.1 Thermostat Models.

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Revision History:

Revision Number	Date	Changed By:	Summary of Change
1	12/2282008	Teejay Riedl / Robert Zirpoli	Initial Draft
2	03/09/09	Teejay Riedl	Audit Cycle
3	03/30/09	Teejay Riedl	Merged data for SS5K association
4	06/16/09	Teejay Riedl	Update
5	10/2009	Teejay Riedl	Update; new numbering
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Overview

This document describes the process to associate (i.e. link) an SS2000 / SS2200 to either an SS1107 or SS5000 / SS5200. The document is separated by base-station type (SS1107 and SS5000 / SS5200).

Terminology:

- “**Controller**” – The SS1107 PTAC Controller unit
- “**Sensor**” – The SS2000 / SS2200 Occupancy Sensor
- “**Poke**” – the process of inserting the Smart Tool into the pinhole on a specified unit, and depressing the microswitch within for a period of approximately ¼ second (unless another hold time is specified).
- “**Smart Tool**” – An unfolded paper clip or similar long, rigid wire

Preparation:

Ensure the components are installed per Telkonet Recommended Best Practices. In particular:

- Controller should be solidly-affixed to the wall and/or outlet
- Controller antenna should be extended, and not bunched-up inside the unit housing or wall
- Sensor should be temporarily located in its desired location via double-sided tape (if radio link to the Controller)
- Sensor should be firmly mounted to its desired location with all low-voltage wiring in place (if using hard-wired link and power from the Controller)

Procedures: SS2000 to SS1107 Controller

Step One – Power the Controller

1. Apply Power to the unit
2. Poke the Controller
3. The LED in the unit will begin a double flash (blink-blink-pause). This indicates that the Controller is in sensor acquisition mode. Observe the rate of the blinking (for comparison in step two)

Step Two – Initiate the Association

1. Poke the sensor
2. Observe the LED on the controller. The LED should continue a double-blink, but the speed of the blink will double as well.



3. After approximately 30 seconds, the LED will indicate the relative signal strength as red, yellow, or green. Yellow or Green are acceptable levels. If a red signal is shown, relocate the sensor to a better location.
4. Poke the 1107. The sensor LED will now blink to indicate the number of sensors which are associated to it. This blinking is normal, and allows an easy way for maintenance personnel to verify that the sensor(s) are still communicating to the controller.

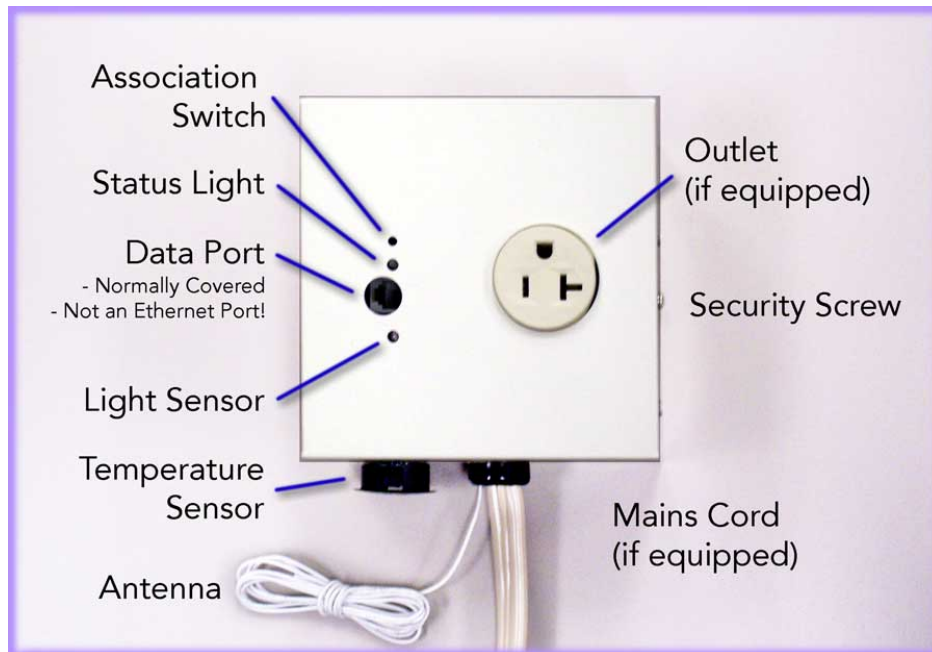


Figure 1: SS1107 ports, indicators, and controls

Sensor Dissociation, SS1107

To force the SS1107 to drop sensor associations, follow these steps:

1. Press and hold the SS1107 microswitch for approximately 10 seconds.
2. The LED will double-blink red for 8-10 seconds while the switch is pressed, then go blank.
3. Once the LED is dark, all previously sensor associations will be deleted.

Note that you cannot dissociate a single sensor from among multiples – all sensor association is dropped when the above process is invoked. You will need to re-associate any desired sensors.



Procedures: SS2000 / SS2200 to SS5000 / SS5200 Thermostat

Unlocking the Command Mode

NOTE: In some cases, depending on the installation and previous deployment, the SS5000 / SS5200 may have its command buttons “locked” to prevent tampering. If the procedures in “Step One” below do not allow control of the thermostat, follow these steps to unlock the Command functions¹.

1. Press and hold the Fan button for ~7-10 seconds.
2. The display will change to show all icons:



3. Press the Fan button. This will toggle the command lock on and off (“on” shown below)



¹ Specific sites may have custom procedures, which are not addressed in this Technical Note. Contact Telkonet Applications Engineering if these steps are not appropriate for your site.



Step One – Power the Thermostat

1. Apply Power to the unit
2. Set the Thermostat to “Learn” mode:
 - a. Lift the front cover to expose the front panel buttons.
 - b. Push the % button three times in a row.
 - c. The display will read 00
 - d. Press the Up Arrow until the display reads 02, then push the % button again. “2” represents the command to associate Sensors.
 - e. The display will change to Learn Mode, showing -0 then any number from 0 to 9.



Figure 2: Thermostat in "Learn Mode"

- f. The Thermostat will remain in Learn Mode for approximately 90 seconds.

Step Two – Initiate the Association

5. While the Thermostat remains in Learn Mode, Poke the sensor.
6. The Thermostat will display a character plus a number, as seen below. The number indicates the relative strength of the RF signal from the Sensor, on a scale of 0 (lowest) to 9 (highest).





Figure 3 : Thermostat showing Signal Strength from Sensor

7. Observe the signal strength. The desired value is anywhere from 5 to 9. If a lower value is shown, re-position the sensor and test. Do not deploy a Sensor to a location yielding a signal strength less than 5.
8. If associating multiple Sensors, press the % button while the Thermostat is still in Learn Mode. The Thermostat will display a number from 0-9. Repeat steps 5 – 7 above.

Step Three – Confirm the Association

9. While the Thermostat is still in Learn mode, press the % button twice. The Thermostat will display 2 (the command code for Sensor association).
10. Use the Up Arrow to increase the 2 to 4, and press the % button. “4” is the command code to ask the Thermostat to display the number of Sensors associated to it.
11. The Thermostat will display the number of associated sensors.

Note: After poking a sensor, you may note the display changes, seemingly at random. This is the Thermostat acknowledging six consecutive data packets from the Sensor, and is normal.

